



# Linux

CPT-201

<http://cpt201.hubner.org/>

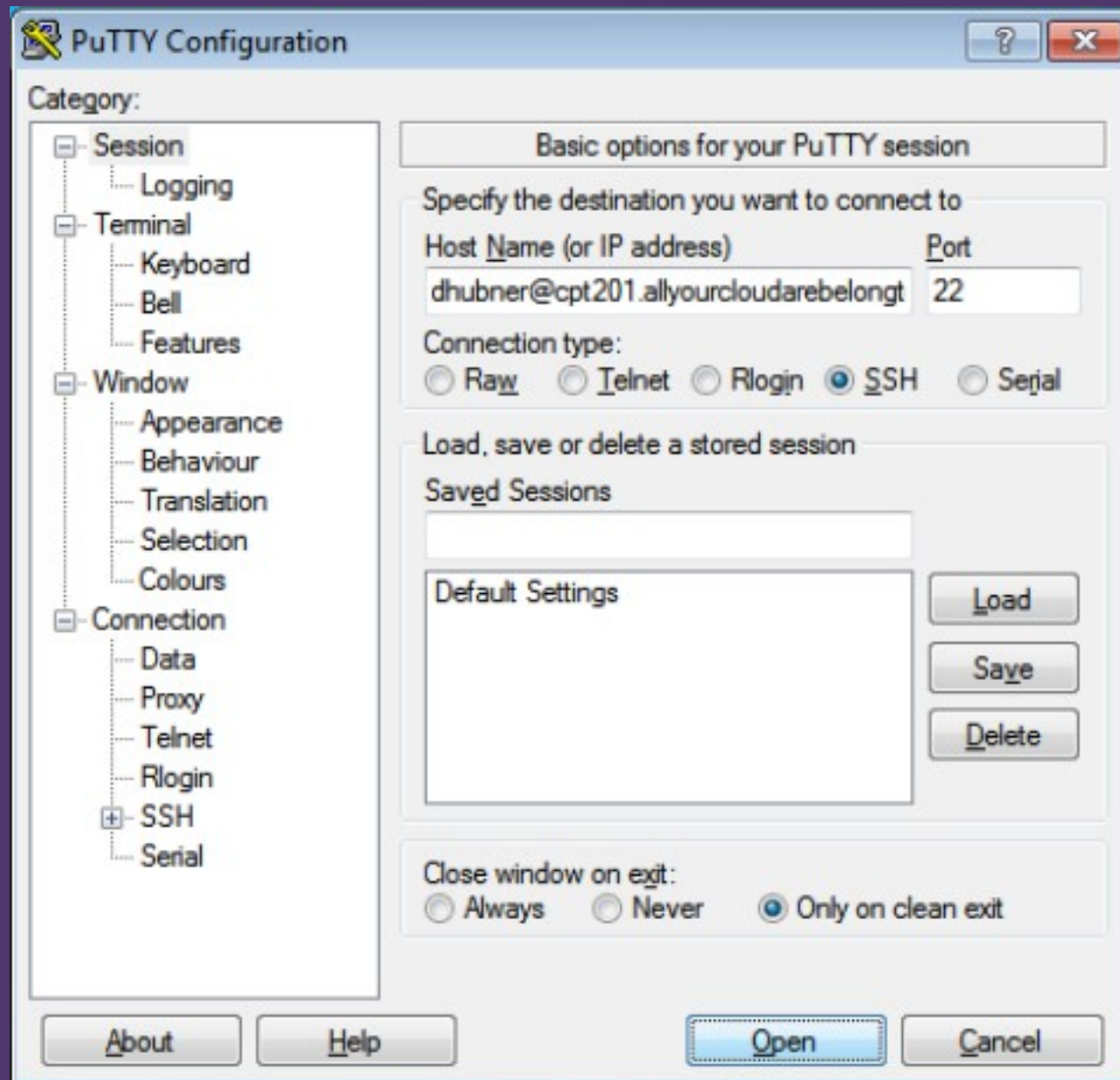
# • SSH = Secure SHell

```
ec2-user@cpt201:~  
ec2-user@cpt201:~ 74x24  
(15:24:35) [devon@t510-dhubner:~] ssh ec2-user@cpt201.allyourcloudarebelongtous.com  
Last login: Wed Oct 24 19:23:58 2012 from me-gw.desknetinc.com  
  
  _|  _|  _|  
  _|  (  _|  /  Amazon Linux AMI  
  _|  \_  _|  _|  
  
https://aws.amazon.com/amazon-linux-ami/2012.03-release-notes/  
There are 19 security update(s) out of 126 total update(s) available  
Run "sudo yum update" to apply all updates.  
Amazon Linux version 2012.09 is available.  
  
  Bash Cheatsheet  
  ┌───────────┴───────────┐  
  | nano      : Edit a Text File | ls      : List Directory |  
  | cd       : Change Directory  | pwd     : Print Working Directory |  
  | mkdir    : Make Directory    | rmdir   : Remove Directory |  
  | less     : View a File       | cat     : Dump a File |  
  | man      : Display Man Page  | grep    : Search a File |  
  | head     : Display top of file | tail    : Display bottom of file |  
  | exit     : Logoff            |         |  
  └───────────┴───────────┘  
  
(19:24:43) [ec2-user@cpt201.crabdance.com:~] █
```

# • ssh username@hostname

```
ec2-user@cpt201:~  
ec2-user@cpt201:~ 74x24  
(15:24:35) [devon@t510-dhubner:~] ssh ec2-user@cpt201.allyourcloudarebelongtous.com  
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  |_____|  
  
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```

# PuTTY = SSH Client on Windows



# Getting Around the CMCC Firewall

- SSH Runs on Port 22
- CMCC Blocks Out-Bound Port 22
- You can run an SSH server on a different port
- SSH using port 80

```
ssh -p 80 username@hostname
```

# SSH to our CPT201 server

- Port: 80
- Hostname: cpt201.allyourcloudarebelongtous.com
- Username: <First-Initial-Firstname><Lastname>
- Password: !cpt201!

```
ssh -p 80
```

```
dhubner@cpt201.allyourcloudarebelongtous.com
```

# Permissions

- u = User
- g = Group
- o = Other (world)

# Permission Bits

- **r** = **R**ead
- **w** = Write
- **x** = e**X**ecutable



User - Group - Other

chmod u+x myfile.txt

chmod g=rx myfile.txt

chmod o-rwx myfile.txt

-**rw****xr**-**x**--- 1 devon devon 0 Oct 24 18:50 myfile

- User = Read, Write
- Group = Read
- World = Nothing

- User = Read, Write, Execute
- Group = Read, Execute
- World = Read, Execute

- User = Read, Write, Execute
- Group = Read, Write, Execute
- World = Read, Write, Execute



# File Compression

## Create Zip File

```
zip -9 -r /tmp/home.zip /home
```

-9 = max compression

-r = recurse



# File Compression

## Create Tar File

```
tar cvf /tmp/home.tar /home
```

**c** = create

**v** = verbose

**f** = file

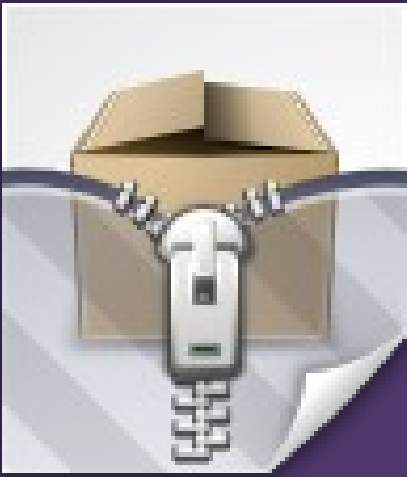


File Compression

gzip Compress a File

```
gzip -9 /tmp/home.tar
```

```
ls -al /tmp/home.tar*
```



# File Compression

## Create Tarball

```
tar czvf /tmp/home.tar.gz /home
```

**c** = create

**v** = verbose

**f** = file

**z** = gzip compress





# Users and Groups



/etc/passwd



/etc/shadow



/etc/group



# Users and Groups

useradd <username>

passwd <username>



# Users and Groups

groupadd <groupname>



# Users and Groups

/etc/group

wheel : x : 10 : devon

apache : x : 10 : cpt201,devon

# The Final



# Paper: The Case for FLOSS

- Two (x2) pages.
- Many Many sources - not just Wikipedia.
- Written as a proposal for choosing FLOSS.
- FLOSS = New Hotness
- Proprietary+Commercial = Old and Busted
- Choose a single topic.

# Presentation

- 10-15 minutes in class
- Powerpoint Presentation
- This is the companion piece to the paper.
- Be sure to explain why we care..

# Topics

- Linux as a Business Desktop
- Linux as a Consumer Desktop
- Linux as a Server
- Linux as a Virtualization Platform
- Linux as an Education Platform
- Linux for Media Production
- Linux for Developers
- Linux for Smart TV's
- Linux as a technology on-ramp for the developing world
- Avoiding the Pain of Windows 8



# Paper / Presentation Timeline

- Week 10 (oct 31) - Discuss Final Project
- Week 12 (nov 14) - Final Project Status Check
- Week 15 (dec 5) - Begin Presentations
- Week 16 (dec 12) - More Presentations
- Week 16 (dec 12) - Final Paper Due

# Homework

## RHCSA Book

- p112 - Administration with SSH
- p465 - User Administration

## Ubuntu Book

- p663 - SSH
- p597 - User Account Utilities

## From Home

- SSH to [cpt201.AllYourCloudAreBelongToUs.com](https://cpt201.AllYourCloudAreBelongToUs.com)
- How do you specify a user's secondary group membership at time of account creation?